

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
30 January 2003 (30.01.2003)

PCT

(10) International Publication Number  
**WO 03/009240 A1**

(51) International Patent Classification<sup>7</sup>: **G07F 17/32**

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(21) International Application Number: **PCT/GB02/03314**

(22) International Filing Date: **19 July 2002 (19.07.2002)**

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(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
0117827.6 **21 July 2001 (21.07.2001)** **GB**

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

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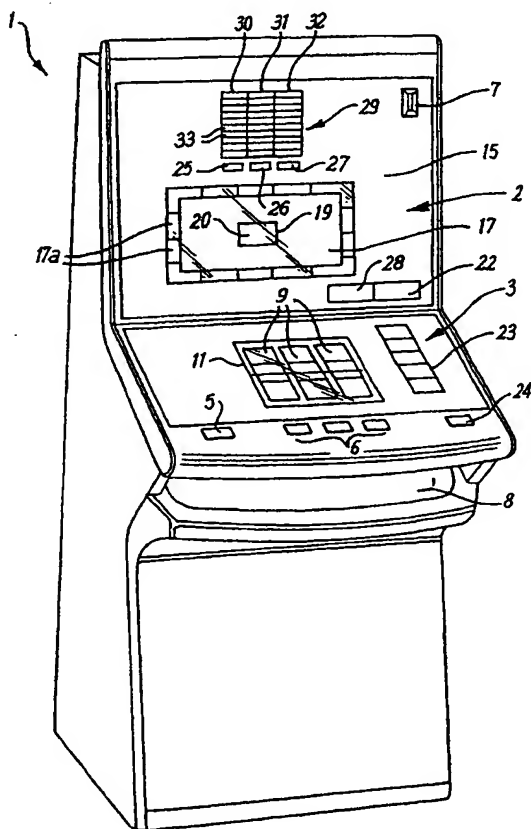
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW). Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM). European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, FI, FR, GB, GR, HU, IE, IT, JP, KE, LI, LU, MC, NL, NO, PT, RO, RU, SE, SI, SK, SL, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW).

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[Continued on next page]

(54) Title: **ENTERTAINMENT MACHINES**



(57) Abstract: An entertainment machine has a main symbol selector in the form of rotatable reels (9), and supplementary feature games, such as a trail game (17) or a gamble ladder (23). When a successful outcome is obtained in a supplementary feature game the player may be given the opportunity of selecting an award from a range of awards. The awards may be listed in different columns (30-33) such that, by pressing a selected button (25-27), the player can choose which column to obtain the award from. All columns then index to make the next listed awards available for subsequent selection. The awards may correspond to elements (33) in the columns (30-33) which are arranged in groups of different numbers of like elements. Grouped elements can be selected together so that the value of the award is determined by the number of elements in the group.

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ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,  
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments*

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

### ENTERTAINMENT MACHINES

This invention relates to player-operable entertainment machines, particularly coin-operated amusement with prizes (AWP) machines, such as "fruit" or "poker" machines, of the kind having a main display device operable in play of a main game for displaying a selected combination of symbols at a win zone. As used herein the term coin is intended also to cover tokens, charge or credit cards or any other means of supplying credit or monetary value.

The main display device of a fruit machine may comprise multiple side-by-side reels (actual or simulated) which are rotatable about a common horizontal axis within a housing behind a window at the win zone. Each reel has symbols at equally spaced positions around its periphery and the reels can be brought to rest with one symbol on each reel displayed through the window on a win line.

If the displayed combination of symbols constitutes a predetermined winning combination an award may be made available to the player.

It is well known to provide a supplementary play feature in the form of a 'feature game' which can be used to enhance the entertainment value of the machine and provide additional or alternative opportunities for winning.

In particular, it is known to provide a panel having sections which can be selectively illuminated to represent movement from location to

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location along a trail, particularly along a wraparound trail, which may simulate the playing of a board game.

Play is transferred from the main reels to the trail of the feature game on a random or predetermined basis and illumination of the panel sections may then be effected by, or in correspondence with, a rotatable subsidiary feature reel, or otherwise, representing the spin of a reel or roll of a dice or other selection.

Awards or award possibilities may be made available to the player in dependence on the location of the trail to which play has progressed, which awards may be cash prizes, feature awards (such as 'nudges' or 'holds') or mystery outcomes which may be a bonus or play termination applied to the feature game, or otherwise.

Other supplementary play features, which provide the player with a different or supplementary opportunity of winning an award are also well known. In particular it is known to provide a gamble feature whereby the player operates a control selectively to try to anticipate an event which is not predeterminable, or not readily predeterminable by the player, e.g. which occurs randomly or pseudo randomly or too quickly to be properly observed by the player. For example, the player may operate buttons to indicate whether the next spin of a reel bearing the numbers 1-12 will produce a number higher or lower than a number currently shown. This play feature may be progressive in that repeated gambles are available until the player loses, or some other limitation is reached. A correct

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guess may advance a designated prize stack e.g. a stack of nudges or features, or cash prizes, etc.

These known supplementary play features are usually provided in association with the main game although they may also be made available  
5 as an alternative to the main game as described in GB 2349494A.

Hitherto, the arrangement has been such that the award made available to the player as the consequence of a successful event in a supplementary play feature is predetermined by the machine. This limits player involvement and entertainment value.

10 An object of the present invention is to provide enhanced possibilities for player entertainment derived from supplementary play features.

According to the invention therefore there is provided an entertainment machine having a main display device for use in playing a  
15 main game, and at least one supplementary play feature arranged to make awards available on the occurrence of successful events, characterised by the provision of an award selection device having a player control which can be operated by the player to select an award from a range of said awards in correspondence with at least one said successful event  
20 occurrence.

With this arrangement enhanced opportunities for player entertainment arise in so far as the player is involved interactively in the selection of awards.

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The award selection device may be operable on all occasions following occurrence of all successful events. That is, the supplementary play feature may have a plurality of said successful events all of which initiate or permit usage of the said award selection device. Alternatively  
5 only some of the said events may initiate or permit such usage, other events resulting in awards or actions being made directly available i.e without usage of the award selection device.

In the case of a feature game having a trail, such as a wraparound trail with sections whereby play can progress from section to section, the  
10 award selection device may be operable when play progresses to at least one said section, and such section (or sections) may be identified e.g. with a special symbol or wording to indicate usage of the award selection device. The or each other section which is not so identified may be a conventional award/action section.

15 In the case of a gamble feature with which operation of a player control resulting in a correct gamble outcome gives rise to an increased award the arrangement may be such that the award selection device is operable when at least one said correct gamble outcome is achieved, and every correct gamble or only certain correct gambles may correspond to  
20 usage of the award selection device.

Alternatively the award selection device may be operable on only some occasions as determined on a machine-determined predictable, random or pseudo random basis.

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The selectable awards are preferably provided in one or more sequences whereby, after selection of an award from the (or one) sequence, a different award, e.g. the next award in the respective sequence, is made available for the next selection.

5            Preferably also some or all of the (or each) sequence is displayed to the player, by indication on a display, so that the player can appreciate the effect of an award selection from the respective sequence e.g. the player can see what will be the next available award. The player can therefore plan a strategy in deciding which awards to take which can  
10           greatly increase the interactive nature of the game and hence the entertainment value to the player. The player may be required to make an award selection when appropriate, or the player may have the option of declining an award selection whereby a default or fall back award may be made.

15           The sequence of awards provides the said range from which the player can select in successive opportunities. Preferably there are multiple sequences from which awards are separately selectable whereby such sequences provide the said range of awards from which the player can select in one opportunity.

20           In a preferred embodiment the (or each) sequence is displayed as a succession of award elements, whereby a selection made from that sequence constitutes selection of one or more such elements at a predetermined selection location or position in the succession e.g. at an

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end of the succession.

The (or each) selected award element may be removed from display, at least at the said location, after selection, and the succession of award elements may then move, e.g. stepwise from position to position, to advance the next selectable award element (or elements) to the said location.

The succession of award elements may be in the form of a column or stack, whereby the said selection location may be at a bottom end of the stack or column and the elements may drop down through one or more positions to effect the aforesaid advancement.

In correspondence with said advancement, further award elements may be added to the displayed succession and this may occur at an input location or position remote from or opposite to the said selection location e.g. at a top end of the above mentioned column or stack. Where two or more award elements are selected and removed from display, advancement may then occur correspondingly through two or more positions, and a like number of further award elements may be added to maintain constant the overall number of elements, although other arrangements involving advancement through disparate numbers of positions and/or reduction or increase in overall number are also possible.

The award elements may be arranged in the succession such that groups of two or more adjacent like elements occur, and each element represents an amount (e.g. a common unit) of award value. In this case,



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an entire such group can be selected when it is displayed at the selection location to make available to the player a total award value equal to the sum of the award values of the individual like elements.

5       The elements are preferably defined by a display device capable of displaying simultaneously a number of such elements being a portion of the sequence thereof, and also capable of effecting or simulating movement of such elements, preferably stepwise from position to position, along the sequence to display a different portion.

10       In a particularly preferred embodiment the elements are defined by regions of a display panel which can be differently illuminated, e.g. which can be back illuminated in different colours, to indicate different award types and/or values, and which illumination can be changed to simulate movement from position to position (e.g. dropping) of the elements. The regions may be of a common size and shape or may be different.

15       Alternatively the sequence of elements may be provided on the periphery of a reel which can be stepped to bring different positions of the sequence into view through a window; or a changeable video screen display may be used, or other arrangement.

20       Preferably there are multiple said sequences (e.g. three) and the award selection is effected by selection of one said sequence. Thus there may be an individual control device for each sequence, such as a respective press button, whereby the player chooses which of the control devices to operate.

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In the case of multiple sequences, after selection of an award the arrangement may be such that the next award is then made available in each sequence, not just in the selected sequence. With this arrangement, in the context of stacks or columns having elements which drop as discussed above, the elements of all stacks or columns may drop after  
5 selection through the same number of positions.

The supplementary play feature which is arranged to make the awards available may be a feature game, or a gamble feature as described above, or any other suitable supplementary feature or combination of  
10 features.

The awards may be cash prizes, feature awards (such as 'nudges' or holds, bonuses or any other suitable awards.

Awards may be given to the player in the usual way e.g. by payout or transfer to accumulated credit value which may be stored on a meter  
15 for use subsequently for further game play.

Most preferably the entertainment machine is a coin-operated machine, such as an 'amusement with prizes' (AWP) machine particularly of the fruit machine or poker machine kind, using actual (or simulated) rotatable reels as mentioned above.

20 The invention will now be described further by way of example only and with reference to the accompanying drawings in which:-

Figure 1 is a diagrammatic perspective view of one form of an entertainment machine according to the invention;

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Figure 2 is a block circuit diagram of the machine; and

Figure 3 is an enlarged diagrammatic representation of a display region of the machine.

Referring to the drawings, Figure 1 shows a fruit machine having a floor-standing box shaped housing 1 having a front wall which includes upper and lower glass panels 2, 3; a number of operating buttons 5, 6, 24, 25, 26, 27, a coin slot 7 and a payout opening 8.

Within the housing 1 there are three axially aligned reels 9 having say 20 symbols at regularly spaced positions around their peripheries.

The reels 9 are axially rotatable and are drivably connected to respective stepper motors 10. The reels 9 are arranged behind a window 11 defined by a printed region of the lower glass panel 3. Each reel 9 can be arrested by the respective stepper motors 10 in any of 20 stopping positions in which one symbol is in precise registration with a horizontal win line in the centre of the window 11 and two further symbols are visible above and below the win line.

The stepper motors 10 are connected to a microprocessor-based control unit 12. This unit is also connected to a coin-mechanism 13, a pay-out mechanism 14 and the buttons 5, 6, 24, 25, 26, 27.

In use, the player inserts coins into the coin mechanism 13 through the slot 7 sufficient to generate credit for one or more games. The amount of credit is shown on an LED or LCD display 22 and the machine is actuated so that a main game can now be played. The main game

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commences after a start button 5 has been pressed and the reels 9 spin and then come to rest so as to select a combination of symbols displayed on the win line. The displayed symbol combination is assessed by the control unit 12 and a win indication is given in the event that the combination is of a predetermined winning nature.

The control buttons 6 can be used to perform 'hold' or 'nudge' functions, when made available to the player, so that the player can seek to influence the outcome of a game, in conventional manner by holding one or more reels against rotation at the start of a main game or by nudging one or more reels through one or more steps at the end of a main game. An LED or LCD nudge meter 28 may be provided to indicate nudge steps available.

The upper panel 2 is a transparent glass panel and within this there is a printed display region 15, which can be back-illuminated with a bank of lamps 16, and which provides a conventional supplementary feature game.

As shown, this feature game comprises a wraparound trail 17 comprising a series of printed sections 17a marked with decoration, information and symbols.

In the centre of the trail there is a printed window behind which an auxiliary feature reel 20 is rotatable. The reel 20 has around its periphery the numbers 1 to 12 corresponding to the values which can be selected with two dice. The reel 20 can be rotated with a stepper motor 21,

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controlled by the control system 12, and brought to rest with one of the numbers shown through the window 19.

Play can progress around the trail 17 by successive back illumination of the sections 17a simulating movement through a number of steps corresponding to the number selected with the feature reel 20.

Play transfers to the trail 17 from the main game in the usual way on a random or predetermined basis, e.g. when predetermined transfer symbols on the main reels 9 are selected on the win line or otherwise.

The player can then operate the start button 5 or another feature button to cause the feature reel 20 to rotate and select a number which causes play to progress along the trail 17 to a selected section 17a at which a symbol on the section 17a is back illuminated.

In the event that the main game results in a winning combination of symbols on the win line 11, and/or the feature game results in selection of a winning section or sections 17a of the trail 17, a cash award may be made available to the player and this may be paid out to the player or credited to the meter 22 to be used for playing further games or to be paid out on demand (e.g. with a payout button). On a random or pseudo random basis the player may be given an opportunity of gambling the cash award using a gamble ladder 23 and gamble button 24.

Some or all of the sections 17a on the trail 17 correspond to awards or events. The awards may be cash prizes as mentioned above which may be credited to the meter 22 or nudge steps which may be

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credited to the meter 28 or other prizes or bonuses which may be awarded in any suitable manner. Other sections 17a correspond to mystery actions which may be prizes or bonuses or which may constitute termination of the feature game.

5           Several of the sections 17a are marked with special symbols or wording, such as the wording Feature Grid. When play progresses to one of these sections 17a play transfers to a back illuminated feature zone 29 of the upper panel 2.

10           This feature zone 29 consists of three side by side columns or stacks 30, 31, 32 respectively immediately above the three press buttons 25, 26, 27. These columns or stacks 30-32 are made up of individual transparent or translucent regions 33 one above the other. The regions 33 are of a common shape and can be back illuminated by lamps 16a.

15           Each region 33 has four back illumination lamps respectively coloured green, yellow, red and blue which are independently operable so that each region 33 can be illuminated in a selected one or these colours.

          Under the control of the control circuit 12, and as shown diagrammatically in Figure 3, the lamps 16a are operated so that there are groups of adjacent regions 33 having the same colour.

20           Each colour corresponds to a particular award type and/or value which may be of the same kinds as the above mentioned awards on the sections 17a and/or other awards. Coloured wording may be used which is selectively illuminated to indicate the award types/values. Like colours

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may correspond to like award types and values. Thus, for example, a yellow region may correspond to a single nudge step.

Figure 3a indicates by way of example a possible layout when play has progressed to a Feature Grid section 17a on the trail 17. The player has the option of pressing button 25, 26 or 27. If button 25 is pressed an award corresponding to the lowermost group (i.e. the three yellow regions 33) is delivered to the player, i.e. an award value equal to the sum of the award values of the three yellow regions (e.g. three nudges). The resulting award is made available to the player in the usual way as discussed above.

The regions 33 of the stacks 30-32 then drop down to remove the selected award from display. That is, in the case where the button 25 has been pressed, the illumination of the bulbs 16a changes so as to give the impression that each region 33 has moved down by three positions, and to give the impression that three new regions 33 have been introduced at the tops of the stacks 30-32. Although the selection is made on the stacks 30, the regions 33 of all three stacks 30-32 drop down through the same number of positions. This results in the new arrangement as shown in Figure 3b.

If instead the player presses button 26, one blue award region 33 is selected and the regions 33 of the three stacks 30-32 drop down through one position. If the player presses button 27 two red award regions 33 are selected and the regions 33 of the three stacks 30-32 drop down

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through two positions. Thus, it is the entire group of adjacent like coloured regions 33 which is selected by the player and the stacks 30-32 are then all advanced stepwise through a number of positions equal to the number of regions 33 of the selected group.

5           With this arrangement the player is interactively involved in selecting awards rather than simply accepting the awards made available by the machine.

          This affords enhanced player entertainment and enables the player to plan a strategy by deciding which award to select and hence which  
10       award to make available for the next selection.

          It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only.

          Thus for example alternatively or additionally to using a feature  
15       game in conjunction with the feature region 29, a gamble feature may be used for this purpose. Also, arrangements other than back-illumination with coloured lamps 16a may be used to indicate movable sequences of awards, such as a changeable video display or rotatable reels having the regions on their peripheries.



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CLAIMS

1. An entertainment machine having a main display device for use in playing a main game, and at least one supplementary play feature arranged to make awards available on the occurrence of successful events, characterised by the provision of an award selection device (29) having a player control (25-27) which can be operated by the player to select an award from a range of said awards in correspondence with at least one said successful event occurrence.
2. A machine according to claim 1 characterised in that the award selection device (29) is operable on only some said events.
3. A machine according to claim 1 or 2 wherein the supplementary play feature comprises a trail (17) with sections (17a) whereby play can progress from section to section along the trail characterised in that the award selection device (29) is operable when play progresses to at least one said section.
4. A machine according to any one of claims 1 to 3 wherein the supplementary play feature comprises a gamble feature (23) whereby operation of a player control (24) resulting in a correct gamble outcome gives rise to an increased award characterised in that the award selection device (29) is operable when at least one said correct gamble outcome is achieved.
5. A machine according to any one of claims 1 to 4 characterised in that the selectable awards are provided in at least one sequence

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(30-32) whereby after selection of an award in the sequence, the next award in the respective sequence is made available for the next selection.

6. A machine according to claim 5 characterised in that at least part  
5 of the respective sequence is indicated on a display (30-32) whereby the said next available award can be seen by the player.

7. A machine according to claim 5 or 6 characterised in that the indicated part of the respective sequence is displayed as a succession of award elements (33) and selection from that  
10 sequence constitutes selection of at least one element at a predetermined location in the succession.

8. A machine according to claim 7 characterised in that the predetermined location is one end of the succession.

9. A machine according to claim 7 or 8 characterised in that after  
15 selection of at least one element (33) the (or each) such element is removed from the display and the respective succession moves to advance the (or each) next selectable element to the said location.

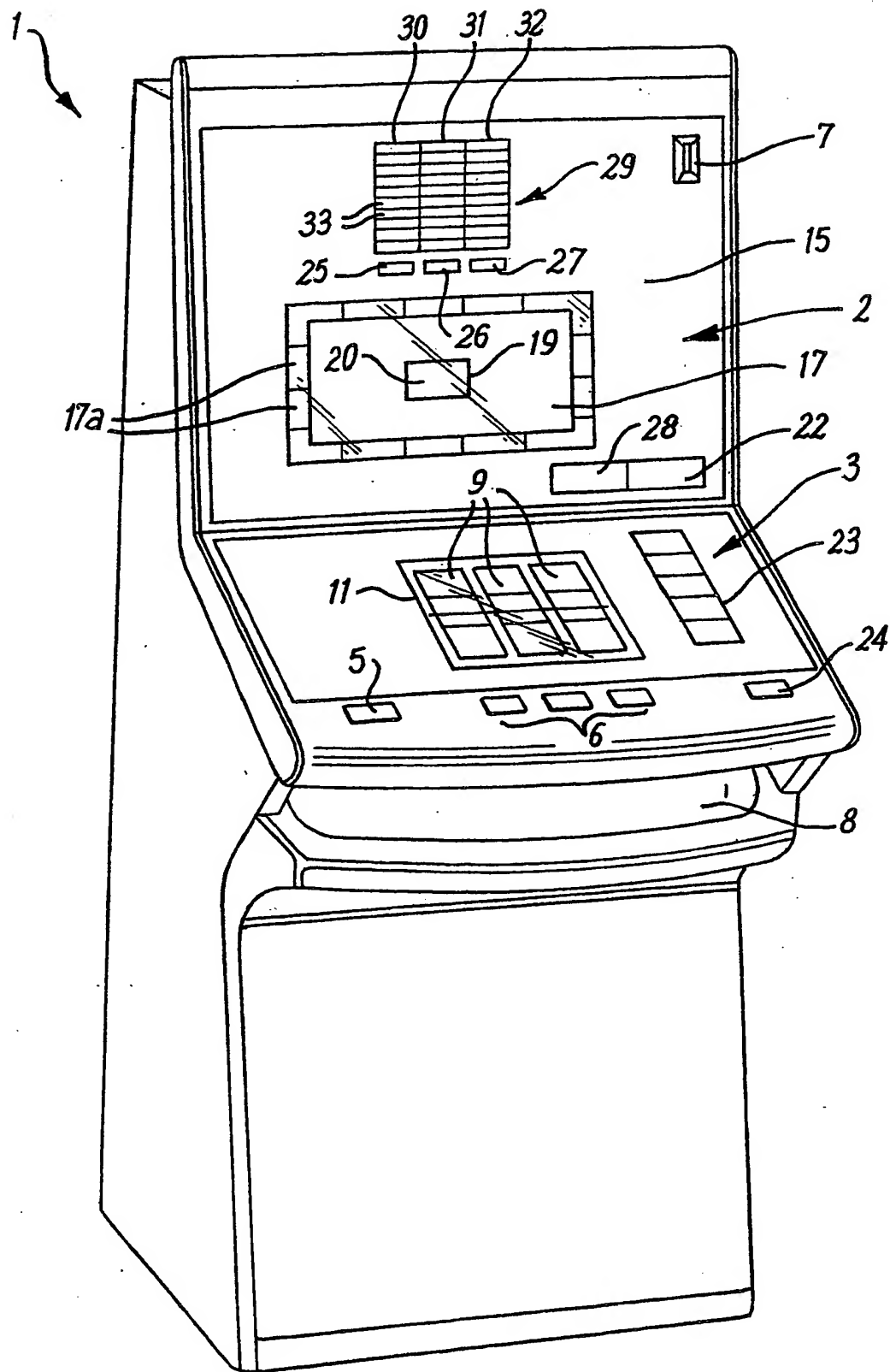
10. A machine according to any one of claims 7 to 9 characterised in that the respective succession of elements (33) is in the form of a  
20 column and the said location is at a bottom end thereof.

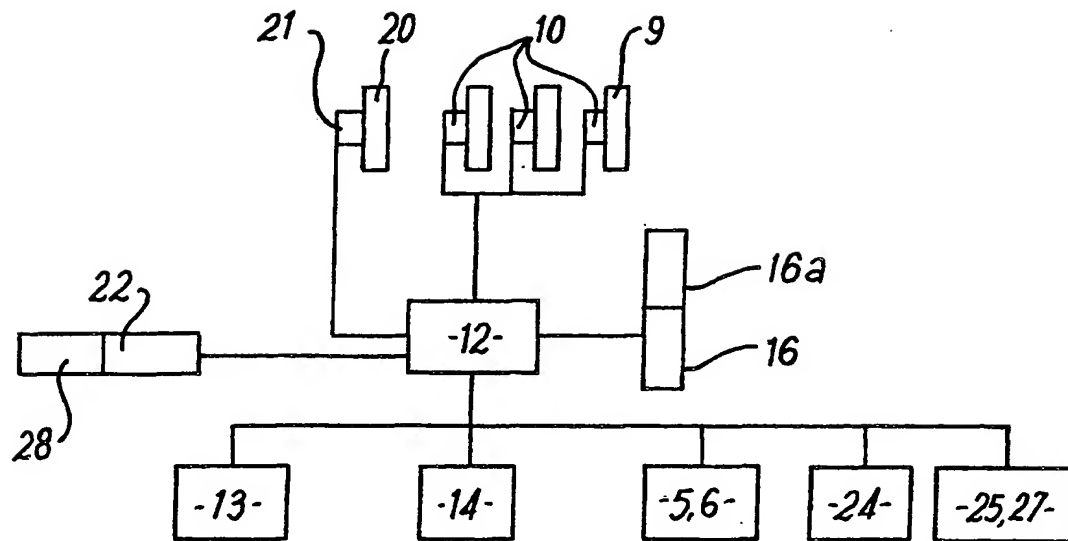
11. A machine according to any one of claims 7 to 10 characterised in that the elements (33) are arranged in at least one group of adjacent like elements each representing an amount of award value,

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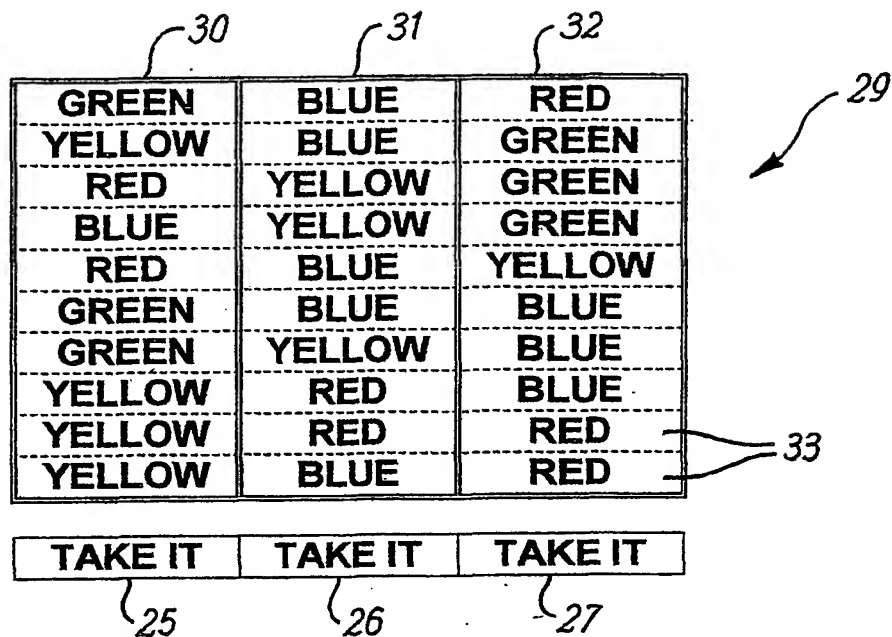
the elements of such group being selectable together.

12. A machine according to any one of claims 7 to 11 characterised in that the elements (33) are defined by regions of a display panel (2) which can be back-illuminated with lamps (16a).
- 5 13. A machine according to any one of claims 5 to 12 characterised in that there are multiple said sequences (30-32) and the player control (25-27) is operable to select a respective said sequence thereby to cause the award selection to be made.
- 10 14. A machine according to claim 13 characterised in that there is a respective control (25-27) for each sequence (30-32).
15. A machine according to claim 13 or 14 characterised in that after selection of one sequence (30-33) the next award is made available for the next selection in all sequences (30-33).
- 15 16. A machine according to any one of claims 1 to 15 which is a coin-operated machine having actual or simulated rotatable reels.

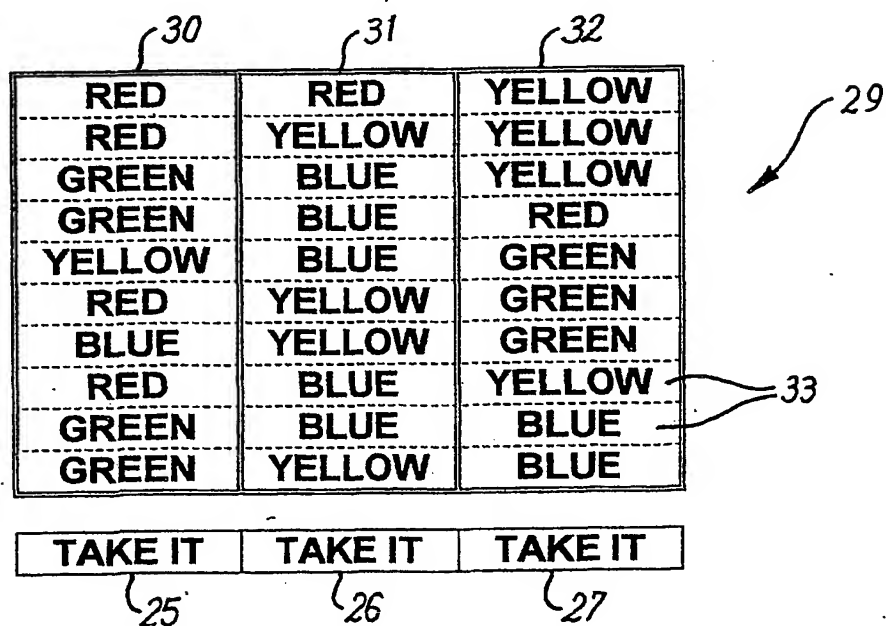
***FIG. 1***



**FIG. 2**



***FIG. 3a***



***FIG. 3b***

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 02/03314

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G07F17/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 5 816 918 A (PETERMEIER NORMAN B ET AL) 6 October 1998 (1998-10-06)  abstract column 3, line 10 -column 12, line 12; figure 1  --- -/--	1,2, 4-11, 13-16

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

4 December 2002

Date of mailing of the international search report

16/12/2002

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
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